

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

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**PCT**

NOTIFICATION OF TRANSMITTAL OF  
INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

Date of Mailing  
(day/month/year) **13 SEP 2004**

Applicant's or agent's file reference

PCT/US03/17703

**IMPORTANT NOTIFICATION**

International application No.

PCT/US03/17703

International filing date (day/month/year)

05 June 2003 (05.06.2003)

Priority date (day/month/year)

07 June 2002 (07.06.2002)

Applicant

BLACK & DECKER INC.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/US

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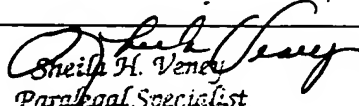
*Shigita H. Venev*  
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# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference  0275Y-581POA	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No.  PCT/US03/17703	International filing date ( <i>day/month/year</i> )  05 June 2003 (05.06.2003)	Priority date ( <i>day/month/year</i> )  07 June 2002 (07.06.2002)
International Patent Classification (IPC) or national classification and IPC  IPC(7): B23D 45/16 and US Cl.: 30/388; 173/216,217		
Applicant  BLACK & DECKER INC.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>7</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>6</u> sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I    <input checked="" type="checkbox"/> Basis of the report</li> <li>II   <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of report with regard to novelty, inventive step and industrial applicability</li> <li>IV   <input type="checkbox"/> Lack of unity of invention</li> <li>V    <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI   <input checked="" type="checkbox"/> Certain documents cited</li> <li>VII <input checked="" type="checkbox"/> Certain defects in the international application</li> <li>VIII <input checked="" type="checkbox"/> Certain observations on the international application</li> </ul>		
Date of submission of the demand  06 January 2004 (06.01.2004)	Date of completion of this report  26 August 2004 (26.08.2004)	
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer <div style="display: flex; justify-content: space-between; align-items: center;"> <div>           Stephen Choi            Telephone No. 703-308-1148         </div> <div style="text-align: right;">             Sheila H. Venev            Paralegal Specialist            Tech. Center 3700         </div> </div>	

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US03/17703

**I. Basis of the report****1. With regard to the elements of the international application:\***☐ the international application as originally filed.☒ the description:pages 1-5 as originally filedpages NONE, filed with the demandpages NONE, filed with the letter of \_\_\_\_\_.☒ the claims:pages NONE, as originally filedpages NONE, as amended (together with any statement) under Article 19pages NONE, filed with the demandpages 6-11, filed with the letter of 06 July 2004 (06.07.2004)☒ the drawings:pages 1-5 as originally filedpages NONE, filed with the demandpages NONE, filed with the letter of \_\_\_\_\_.☐ the sequence listing part of the description:pages NONE, as originally filedpages NONE, filed with the demandpages NONE, filed with the letter of \_\_\_\_\_.**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).☐ the language of publication of the international application (under Rule 48.3(b)).☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:**☐ contained in the international application in printed form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.**4. ☒ The amendments have resulted in the cancellation of:**☐ the description, pages NONE☒ the claims, Nos. 18☐ the drawings, sheets/fig NONE**5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\***

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO
Inventive Step (IS)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO
Industrial Applicability (IA)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO

**2. CITATIONS AND EXPLANATIONS**

Claims 33-42 meet the criteria set out in PCT Article 33(2)-(3) because the prior art does not teach or fairly suggest the claimed features.

Claims 4-5, 9, 14-15, 17, 20, 26-27, and 30 meet novelty under PCT Article 33(2) because no single reference show all the claimed features.

Claims 1-3, 6-8, 10-13, 16, 19, 21-25, 28-29, 31-32, and 43 lack novelty under PCT Article 33(2) as being anticipated by Looper et al.

Looper discloses all the recited elements of the invention including a drive system (54, 30), a symmetrical housing defining a chamber (chamber portion of 12) for the drive system, a handle having a first side and a second side and defining a through cavity (portion of 12, 14, 18) wherein the drive system engages (via 70, 72) the first side of the handle (side containing 68) and the housing engages (via 78) the second side of the handle (peripheral side), a guard (26, 28), a shoe (24) a motor (30), a gear case (44), a flange (60), and a plurality of common fasteners (70).

It is noted that claims do not require a first side and a second side being opposite to each other relative to the handle.

Claims 4-5, 14-15, 17, and 26 lack an inventive step under PCT Article 33(3) as being obvious over Looper et al. in view of Palm.

Looper discloses the invention substantially as claimed except for a pair of symmetrical air flow passages having substantially symmetrical fins and ribbing. Palm discloses a gear case having internal ribs forming air flow channels. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide ribs and fins forming air flow channels as taught by Palm on the device of Looper in order to provide means for cooling the gear case to prevent overheating.

Claims 9, 20, 27, and 30 lack an inventive step under PCT Article 33(3) as being obvious over Looper et al.

Looper discloses the invention substantially as claimed except for a flange and a battery. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a flange on the housing of Looper since the use of flange is old and well known in the art for the purpose of coupling parts together. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Looper to provide a battery mounted to the handle since the use of handle-mounted battery is old and well known in the art of power tool for the purpose of providing a compact and easily handled tool.

Claims 1-17 and 19-43 meet the criteria set out in PCT Article 33(4), and thus meet industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US03/17703

## VI. Certain documents cited

## 1. Certain published documents (Rule 70.10)

Application No Patent No.	Publication Date (day/month/year)	Filing Date (day/month/year)	Priority date (valid claim) (day/month/year)
US 2003/0121679	03 July 2003 (03.07.2003)	27 December 2001 (27.12.2001)	NONE

## 2. Non-written disclosures (Rule 70.9)

<u>Kind of non-written disclosure</u>	<u>Date of non-written disclosure</u> (day/month/year)	<u>Date of written disclosure referring to</u> <u>non-written disclosure</u> (day/month/year)
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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US03/17703

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

The drawings are objected to under PCT Rule 66.2(a)(iii) as containing the following defect(s) in the form or content thereof: they do not include the following reference sign(s) mentioned in the description: 20.

The description is objected to as containing the following defect(s) under PCT Rule 66.2(a)(iii) in the form or contents thereof: page 3, line 25, "set12" should be --set 12--.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

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**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the questions whether the claims are fully supported by the description, are made:

Claim 43 is objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because claim 43 is indefinite for the following reason(s): it is not clear what structure is set forth by "in said left hand configuration, said left hand guard assembly is mounted to said first side of said handle in said right hand configuration, said right hand guard assembly is mounted to said second side of said handle".

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/US03/17703

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

**V.1. Reasoned Statements:**

The opinion as to Novelty was positive (Yes) with respect to claims 4-5, 9, 14-15, 17, 20, 26-27, 30, 33-42

The opinion as to Novelty was negative (No) with respect to claims 1-3, 6-8, 10-13, 16, 19, 21-25, 28-29, 31-32, 43

The opinion as to Inventive Step was positive (Yes) with respect to claims 33-42

The opinion as to Inventive Step was negative (NO) with respect to claims 1-17, 19-32, 43

The opinion as to Industrial Applicability was positive (YES) with respect to claims 1-17, 19-43

The opinion as to Industrial Applicability was negative (NO) with respect to claims NONE



## CLAIMS

What is claimed is:

1. A modular power tool comprising:

drive system;

5

a housing defining a chamber for said drive system;

a handle defining a through cavity, having a first side and a second side, said first side of said handle engages one of said drive system and said housing and said second side of said handle engages the other of said drive system and said housing; and

10

wherein, said drive system, said housing and said handle are adaptable for use in a left and right hand orientation, wherein in said left hand orientation, said housing is mounted on said first side of said handle and in said right hand orientation, said housing is mounted on said second side of said handle.

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2. The modular power tool of claim 1 further including:

a guard coupled to said drive system; and

a shoe mounted to said guard.

20

3. The modular power tool of claim 1 wherein said drive system further includes:

a motor; and

a gear case coupled to said motor.

25

4. The modular power tool of claim 3, wherein said gear case includes a pair of substantially symmetrical air flow passages which enables said gear case to provide ventilation regardless of orientation.

30

5. The modular power tool of claim 4 wherein said air flow passages have substantially symmetrical fins and ribbing.

6. The modular power tool of claim 1 wherein said handle is adaptable to receive a power supply.

7. The modular power tool of claim 1 wherein said handle includes left and right shells.

8. The modular power tool of claim 1 wherein said drive system  
5 further includes a flange for coupling to said handle.

9. The modular power tool of claim 1 wherein said housing further includes a flange for coupling to said handle.

10. The modular power tool of claim 1 wherein said housing is symmetrical.

11. The modular power tool of claim 1 wherein said handle, said drive system and said housing are connected by a plurality of common fasteners.

15

12. A modular power tool comprising:  
a motor;  
a motor housing defining a chamber for said motor;  
a handle including a first side and a second side and defining a  
through cavity extending from said first side to said second side;  
20 a gear case coupled to said motor;  
a guard assembly coupled to said gear case; and  
wherein, said handle and said gear case are adaptable for use in a left and a right hand orientation, wherein in said left hand orientation, said  
25 housing is mounted on said first side of said handle and in said right hand orientation, said housing is mounted on said second side of said handle.

13. The modular power tool of claim 12 wherein said guard assembly includes a guard and a shoe assembly coupled to said guard.

30

14. The modular power tool of claim 12 wherein said gear case includes a pair of substantially symmetrical air flow passages each of which provides a vent passage in the respective left and right hand orientation.

15. The modular power tool of claim 14 wherein said air flow passages have substantially symmetrical fins and ribbing.

5 16. The modular power tool of claim 12 wherein said handle is a clam shell handle.

17. The modular power tool of claim 14 wherein said handle is adaptable to receive a power supply.

10 18. CANCELLED

19. The modular power tool of claim 12 wherein said motor further includes a flange for coupling to said handle.

15 20. The modular power tool of claim 12 wherein said motor housing further includes a flange for coupling to said handle.

20 21. The modular power tool of claim 12 wherein said motor housing is symmetrical.

22. The modular power tool of claim 12 wherein said motor, said gear case, said handle, said guard assembly and said housing are connected by a plurality of common fasteners.

25 23. A method for assembling a modular power tool, comprising:  
inserting a drive system through a cavity in a symmetrical handle  
such that said drive system is supported through said cavity;  
fastening a drive housing to said symmetrical handle;  
wherein, said drive housing, said symmetrical handle, and said  
30 drive system are coupled with a plurality of common fasteners.

24. The method of claim 23 further including:  
fastening a guard assembly to said drive housing.

25. The method of claim 23 wherein said drive system includes:  
a motor; and  
a gear case coupled to said motor.

5           26. The method of claim 25 wherein said gear case includes a pair of substantially symmetrical air flow passages, said air flow passages have substantially symmetrical fins and ribbing.

10           27. The method of claim 23 further comprising the step of mounting a battery to said handle.

28. The method of claim 23 wherein said handle is a clam shell handle.

15           29. The method of claim 23 wherein said drive system further includes a flange for coupling to said handle.

30. The method of claim 23 wherein said drive housing further includes a flange for coupling to said handle.

20           31. The method of claim 23 wherein said drive housing is symmetrical.

32. The method of claim 24 wherein said guard assembly includes a guard and a shoe assembly coupled to said guard.

25           33. A modular power tool kit, comprising:  
a plurality of different sized motors each including a mounting flange portion having a common mounting hole pattern;  
a gear case adapted to couple to each of said plurality of different sized motors;  
30           a handle having a motor opening adapted to receive each of said plurality of different sized motors therein;  
a left hand guard assembly and right hand guard assembly each adapted to be mounted to said gear case; and

wherein said handle, said gear case and said plurality of different sized motors couple to said left and right hand guard assemblies in both a left and right hand configuration.

5           34. The kit of claim 33 wherein said gear case has a pair of substantially symmetrical air flow passages which enables said gear case to provide ventilation in both a left hand and right hand configuration.

10           35. The kit of claim 34 wherein said air flow passages have substantially symmetrical fins and ribbing.

36. The kit of claim 33 further comprising a battery adapted to be mounted to said handle.

15           37. The kit of claim 33 wherein said handle is a clam shell handle.

38. The kit of claim 33 further including a motor housing, including a flange for coupling to said handle.

20           39. The kit of claim 38 wherein said motor housing is symmetrical.

40. The kit of claim 33 wherein said left and right hand guard assemblies each include a saw guard and a saw shoe assembly coupled to said saw guard.

25           41. The kit of claim 33 wherein said plurality of different sized motors, said gear case, said handle, and said left and right hand guard assemblies are adapted to be connected by a plurality of common fasteners.

42. A modular power tool kit, comprising;  
a plurality of different sized motors each including a mounting  
flange portion having a common mounting hole pattern;  
a gear case adapted to couple to each of said plurality of different  
5 sized motors;  
a handle having a motor opening adapted to receive each of said  
plurality of different sized motors therein;  
a guard assembly adapted to be mounted to said gear case; and  
wherein said handle, said gear case and said plurality of different  
10 sized motors couple to said guard assembly.

43. A modular power tool kit, comprising;  
a motor;  
a gear case adapted to be mounted to said motor;  
15 a handle having a motor opening adapted to receive said motor  
therein, said handle including a first side and a second side with said motor  
opening extending from said first side through said second side;  
a left hand guard assembly and right hand guard assembly each  
adapted to be mounted to said gear case; and  
20 wherein said handle, said gear case and said motor couple to said  
left and right hand guard assemblies in both a left and right hand configuration,  
wherein in said left hand configuration, said left hand guard assembly is mounted  
to said first side of said handle in said right hand orientation, said right hand  
guard assembly is mounted to said second side of said handle.

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